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(71) Applicant: SONY CORPORATION Tokyo (JP)

(72) Inventors:

Morikawa, Masayoshi,
 c/o Intellectual Property Div
 Shinagawa-ku, Tokyo 141 (JP)

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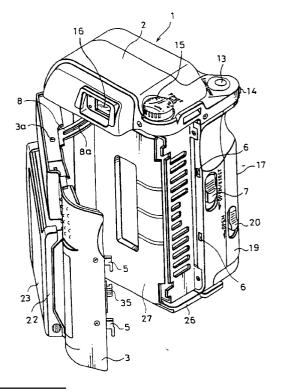
- Matsumoto, Yoshitaka, c/o Intellectual Property D. Shinagawa-ku, Tokyo 141 (JP)
- Shirokoshi, Hisao, c/o Intellectual Property Div.
 Shinagawa-ku, Tokyo 141 (JP)
- Funakoshi, Naoki, c/o Intellectual Property Div.
 Shinagawa-ku, Tokyo 141 (JP)

(74) Representative:

Purvis, William Michael Cameron et al D. Young & Co., 21 New Fetter Lane London EC4A 1DA (GB)

- (54) Cassette eject mechanism, battery loading mechanism and mechanical chassis supporting mechanism
- A cassette eject mechanism for a recording or reproducing apparatus can remove a cassette eject button from a housing and can reliably eject a tape cassette only when a tape cassette should be loaded or unloaded. A battery loading mechanism for an electronic equipment can make the loading of battery simple and reliable, and becomes easy to handle. The locking mechanism can be simplified in structure so that the number of assembly parts can considerably be reduced. Further, a mechanical chassis supporting mechanism in a recording apparatus is for use with an apparatus in which a mechanical chassis or cabinet can be reduced in thickness. According to this mechanical chassis supporting mechanism, it is possible to prevent an external stress from being applied to the mechanical chassis as a twisting deform force.

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EUROPEAN SEARCH REPORT

Application Number EP 94 30 6101

Category	Citation of document with ind of relevant pass		Relevant to claim		
X	US-A-5 121 268 (S.NA * column 3, line 45 figures *	KAYAMA) - column 5, line 66;	1,2	G11B31/00 G11B33/12 G11B33/02 G11B15/675	
X	EP-A-0 393 647 (SONY * abstract; claims 1		1-4,6,		
X	GB-A-2 241 371 (SAMS LTD.) * abstract; figures * page 5, line 6 - p	*	1		
A		EER ELECTRONIC CORP.) - line 48; figures *	1		
Α	PATENT ABSTRACTS OF vol. 17, no. 238 (E- & JP-A-04 365270 (CA 1992, * abstract *		1 er		
A	EP-A-0 522 330 (CANON K.K.) * column 4, line 47 - column 7, lir figures *		1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G11B H01M	
A	PATENT ABSTRACTS OF JAPAN vol. 11, no. 312 (E-548), 12 October 1987 & JP-A-62 105579 (SONY CORP.), 16 May 1987, * abstract *		9,10		
A	EP-A-0 528 420 (SONY 1993 * column 17, line 4 figures 5,6 *	 CORP) 24 February - column 18, line 23;	9		
		-/			
	The present search report has be	en drawn up for all claims			
	Place of search	Date of completion of the search		Examiner	
	THE HAGUE	7 October 1996	D	eclat, M	
Y: pa	CATEGORY OF CITED DOCUMEN rticularly relevant if taken alone rticularly relevant if combined with anot cument of the same category chnological background	E : earlier patent after the filin ther D : document cit L : document cit	document, but g date ed in the applica ed for other reas	published on, or ction	



European Patent Office

	CLAIMS INCURRING FEES					
The	e present European patent application comprised at the time of filling more than ten claims					
ב	All claims fees have been paid within the prescribed time limit. The present European search report to been drawn up for all claims.	as				
	Only part of the claims fees have been paid within the prescibed time limit. The present European search report has been drawn up for the first ten claims and those claims for which fees have been					
	namely claims:					
	No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.					
	ACK OF UNITY OF INVENTION					
The of the	earch Division considers that the present European patent application does not comply with the requireme unity of the invention and relates to several inventions or groups of inventions, namely:	nt				
see s	eet B					
X	All further search fees haven been paid within the fixed time limit. The present European search report has been drawn up for all claims					
	Only part of the further claims fees have been paid within the prescibed time limit. The present European search report has been drawn up for for those parts of the European patent application whice relate to the inventions in respects of which search fees have been paid,	h				
	namely claims:					
	None of the further claims fees have been paid within the prescibed time limit. The present European search report has been drawn up for for those parts of the European patent application which relate to the invention first mentioned in the claims,					
	паmely claims:	1				



EUROPEAN SEARCH REPORT

Application Number EP 94 30 6101

Category	Citation of document with in	dication, where appropriate,	Relevant	CLASSIFICATION OF THE
ategory	of relevant pas		to claim	APPLICATION (Int.Cl.6)
Α	US-A-4 853 302 (YAM/ August 1989 * abstract; figures	ANAKA AKIRA ET AL) 1 *	9,10	
A	US-A-4 468 439 (OHA August 1984 * abstract; figures	RA TSUNEMASA ET AL) 28	9,10	
A	GB-A-2 011 156 (PHI * abstract; figures	LIPS NV) 4 July 1979 *	9-12	
A	EP-A-0 541 449 (SON * column 1, line 18 * abstract; figures	<pre>- column 4, line 51 *</pre>	13	
A	WO-A-93 06589 (SEIK 1993 * abstract; figures	O EPSON CORP) 1 April	13	
Α	EP-A-0 519 456 (CAN * column 8, line 7 figures 6-8 *	ON KK) 23 December 1992 - column 11, line 35; 	13	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
	·			
	The present search report has h	een drawn up for all claims		
		Date of completion of the search		Examiner
	Place of search THE HAGUE	7 October 1996	De	clat, M
	CATEGORY OF CITED DOCUME	NTS T : theory or princip E : earlier patent do	ple underlying the	e invention
X: particularly relevant if taken alone after to Y: particularly relevant if combined with another D: docum document of the same category L: docum A: technological background			in the application for other reasons	



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EP 94 30 6101 -B-

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-8 : Cassette eject mechanism for a recording or reproducing apparatus.

2. Claims 9-12 : Battery loading mechanism for an electronic

equipment.

3. Claims 13-20 : Mechanical chassis supporting mechanism in

a recording or reproducing apparatus.